BACKGROUND FOR RESEARCH IN HEALTH AND MEDICAL CARE*

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STIMULATION provided by the World Health Organization of the United Nations has created widespread sympathy in the United States for the unmet health needs of less favored, underdeveloped areas. We read with tolerant disapproval of a cultural resistance to immunization against typhoid and cholera, of a complete unwillingness to purify water or take proper sanitary measures for the prevention of hookworm or schistosomiasis. We note with dismay the existence of nations that permit unnecessary deaths from medically and surgically curable disease because these disorders cost too much to cure. Yes, we do sympathize with our less fortunate brethren in those backward nations who still have not achieved that happy ability to apply current biologic knowledge for the prevention and cure of disease.

Let me, therefore, describe for you some of the deficiencies of one such backward area.

1) Although the major factor responsible for the eighth leading cause of death is well known and amenable to control, nothing useful is being done to control it.

2) Among a group of its young men examined for the army and rejected because of medical reasons, one half are not now under medical care for the conditions responsible for their rejection.

3) Despite the fact that a "sure-cure" drug is available against one of its most serious major chronic diseases, the incidence of this disease has increased sevenfold in a recent seven-year period and still shows no real sign of decreasing.

4) Although effective methods exist for the detection of two serious chronic diseases—one the seventh leading cause of death and the other the second leading cause of blindness—and although it is generally agreed that when detected life can be prolonged in one instance, and

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blindness prevented in the other, formal detection programs now in existence are finding less than one fiftieth of the unknown cases of the first condition and less than one two-hundredth of the other per year.

5) Despite the fact that a proved method has existed for twenty years capable of decreasing by two thirds the incidence of the leading chronic disease of the area, that method is not yet being used.

6) Recently a new local research project appeared to have uncovered evidence strongly suggesting that the population might be on the verge of being able to control its leading cause of death. Prominent citizens in the state, including members of a committee appointed by its chief executive, immediately denounced the study, not because of any scientific shortcomings but because its results might be inimical to the economy of certain industries within that state.

7) Although a nearly sure method exists for the early detection and cure of a disease which up to now has been causing about four hundred deaths per year in that area, only about 1 per cent of local hospitals have adopted this detection procedure as a routine part of the examination of newly admitted patients.

8) It is well known that this area possesses one of the finest arrays of medical talent to be found anywhere in the world. It also must struggle with unusually vast problems in chronic disease control. Yet its fastest growing organization for the delivery of medical care to patients with chronic disease appears to be the emergency room, the one health facility in which adequate treatment for these conditions is all but impossible to achieve.

9) What does this area do when a patient is found who is so ill that the best physicians and research institutions in the area are unable to cure him? Do they focus their research talent upon his problem in an all-out search for a solution? No, quite the contrary, their best hospitals are generally firmly closed to him, their best qualified physicians no longer available, and he is promptly turned over to a medically isolated institution known as a proprietary nursing home where he is offered some of the poorest quality medical care of which this particular area is capable.

I have no doubt that by now you have correctly identified this "backyard" area, this "underdeveloped" community with so many unresolved problems of health and medical care, this strange place where the culture of the citizens appears to interfere so effectively with the

adequate translation of biologic science into health service. It is, of course, our own city of New York. Our eighth leading cause of death is lung cancer; the leading uncontrolled cause is, quite obviously, cigarette smoking. The major chronic disease that has shown the sevenfold increase is syphilis; the magic biologic agent which could not by itself stem the tide is penicillin. Diabetes is the seventh leading cause of death, and glaucoma the second leading cause of blindness. Both are conditions that can be readily detected early in their course, but both are now receiving grossly inadequate attention. The leading cause of chronic disease in this area is, of course, dental caries; its still unused preventive, soon to be finally applied, is fluoridation of the water supplies. The leading local cause of death is coronary heart disease; its recent pertinent research is the anticoronary club using the Prudent Diet, so bitterly attacked by certain industrial groups. The curable chronic disease that hospitals could easily detect by a routine program of examining new admissions? Why, naturally, it is cancer of the cervix, now being detected routinely among the newly admitted patients at only two of our many local hospitals.

During 1963, when the city was experiencing a 10.2 per cent increase in the incidence of tuberculosis, we were able to convince WHO to send us some of its leading experts on bacille Calmette Guérin vaccination. This was rather simple because of all the nations of the world, the United States of America is probably the most underdeveloped from the standpoint of the use of BCG vaccine!

The lesson is quite clear. Social inertia is part of the culture of every nation; we are all underdeveloped. We in New York who have done such a remarkable job of uncovering new basic knowledge, we who operate at such a high level of scientific sophistication are thereby for that very reason probably the most underdeveloped, the most lacking in the full realization of our health service potential. Our health research council program will undoubtedly put additional pressures upon us as it succeeds in widening still further the gap between known biologic fact and its successful application. This, however, we believe it will not do, because it has also accepted the responsibility for devoting a share of its resources to research in the application of new scientific knowledge for the improvement of health services.

There are really only five ways through which we can progress in public health.

1) We can create more services.

2) We can persuade more people to use them through explanation, education, and motivation.

3) We can repackage the existing services so they will fit more directly into the existing motivation of the population and hence will be more completely used.

4) We can, through research, create new knowledge that will permit the development of new packages that can then fit into existing patterns of motivation.

5) We can participate in moves to create major shifts in the cultural attitudes of the population by which people become convinced that certain health deficiencies should no longer be tolerated. This greatly increases the local priority for efforts aimed at each of the other four methods of creating health progress.

Each of these five activities deserves extensive discussion, and the health research council has been involved with all of them to some degree; in many quite brilliantly. My purpose today is to touch upon some of its activities with the third item on the list; namely, the repackaging of services so they will fit more completely into the existing motivation of the population.

Let me first review a bit of pertinent recent history. When I began my career in public health work, half of my tuberculosis patients with positive sputum were not receiving treatment in a tuberculosis hospital. They were uncooperative, and a major part of my mission was seeking to change their behavior. Now, two decades later, half of my positive sputum cases are still not hospitalized, but thanks to isoniazid they do not need institutionalizing, since most can be treated adequately on an ambulatory basis. They have suddenly become cooperative, not because they have changed, but because the available treatment package is one that suits their regular behavior. A recent study of local community chest x-ray programs has proved to us that there is far less value in mass education of the population and far greater success if you place your x-ray equipment in such a way as to block the sidewalk of one of the busiest streets in town. If a safe cigarette could be developed we should have a major package that—granted its taste was passable—would fit safely and healthfully into the habitual behavior pattern of our nation's tens of millions of inveterate cigarette smokers.

The over-all goal of a community-wide program in developmental

research can be stated as universal access to high-quality comprehensive health and medical care. Without taking the time to describe all the implications of this goal let us merely say a few words more about each of its two main sections:

1) Universal access means that all people in the area are truly capable of receiving care. If any significant group appears not to receive care for whatever reasons then we must examine the barriers involved and see how we might repackage services to surmount the barrier.

2) High-quality comprehensive care denotes far more than the familiar point that ill people should receive care from qualified physicians and accredited institutions. It entails the concept of continuity of care, the correction of that fragmentation of health services of which our city is such a prime example. It includes preventive care during the earliest stages of disease and, in fact, care even before disease begins. It means that every patient should be considered as a total individual suffering from dozens of actual, potential, or rehabilitable conditions and not just from a chief complaint and single specialized present illness. It insists that as long as any large group is not receiving quality care in the neighborhood of a teaching hospital then that hospital is not giving quality care to its community. It includes the eventual correction of all of the facts I noted above that give the city of New York so many of the attributes of an underdeveloped nation from the health standpoint.

The Health Research Council has created a special study group to explore the medical care needs of New York, and it has been supporting a number of investigations in the field. Since essentially all of these projects are still either under way or have not yet been reported in detail these remarks will be limited to a brief description of their approaches and objectives.

The St. Luke's Hospital Project

The improvement of medical care in New York must occur largely through changes in the activities of the existing medical and health facilities. The creation of new organizations is quite unthinkable at this time. In an attempt to assist the teaching hospital to broaden its concerns in the medical-care field the Health Research Council has granted funds to the St. Luke's Hospital Department of Medicine to

permit it to create a unit devoted entirely to community health studies. This unit has now received additional federal grants to study 1) the home follow-up of patients with congestive failure, 2) patient preferences in hospital accommodations, and 3) the organization of a "self-help" community group of elderly residents in a large cooperative apartment. An additional most interesting project deals with a study of patterns of care being received by patients now visiting both emergency rooms and outpatient department clinics at four of New York's teaching hospitals in order to assess the importance of the emergency room in the total complex of care.

The Cornell Medical College Project

At Cornell Medical College a systematic attempt is being made to assess the value, operating problems, and costs of a program of high-quality, comprehensive care for a large number of welfare patients. The test and control groups were randomly admitted to the study at the time the family entered the welfare roster. A test group is invited into the project for a complete medical and health check for each member of the entire family. From that time on the broadest possible medical care is given to each such family member, whether that care be given in clinic, hospital bed, chronic disease hospital, nursing home, or in the patient's home. The utilization of medical care by this group can be compared with that of the control group who are allowed to seek care only when ill and are not urged to undertake such a complete medical regimen even before obvious illness becomes manifest. The results of this project are being awaited with keen interest as we become increasingly interested and concerned with programs to develop comprehensive medical care.

The Westchester-Pelham Day Mental Health Care Project

By far the leading cause of hospitalization and incapacity in our civilization is mental disease. During the past decade the ataractic drugs have opened new vistas of hope in the management of serious mental diseases on an ambulatory basis. This reversal of a steadily increasing trend toward hospital custodial care is one of the most amazing medical developments of our age. The Health Research Council is playing its role in the advancement of this era by supporting a demonstration

project in the Westchester-Pelham Health District offering ambulatory mental health care to patients so seriously ill that they would ordinarily be committed to mental hospitals for their complete care. Special studies are attempting to assess the effectiveness of various forms of treatment under the day-care umbrella and to develop new ones.

The Montefiore Prenatal and Infant Care Project

One of the most significant problems of our age is the growing insufficiency of trained personnel for the provision of medical care. Not only have our basic research programs added new possibilities for service, but the population has begun to demand a degree of care undreamt-of in an era of ready tolerance for inadequate care. The Health Research Council is supporting a project at Montefiore Hospital in which an attempt is being made to ascertain whether a nurse can substitute for a physician in certain appropriate aspects of the program in maternity care. Although limited to a specialty program, the implications of this Health Research Council-sponsored research go much further and suggest the exploration of many new uses for auxiliary personnel. Only in this way can we hope to make use of available scientific knowledge toward the solution of a host of significant public health problems.

The Cost of Health and Medical Care Projects

It is generally agreed by students of governmental administration that the needs of a population are insatiable. At some point a compromise must be made between needs and resources. Certain priorities are established, and thereafter we must face the unpleasant fact that certain needs must then go unsatisfied. As we enter this highly significant but ill-understood field, it is of the greatest importance for us to know the existing division of resources. Studies are being supported by the Health Research Council to investigate the costs of existing medical care and health programs and, at the same time, to identify the existing sources of these funds. It has already been shown that one half of the entire hospital bill and one third of the entire medical care cost of illness in the city are already being borne by the governmental programs.

Conclusion

The studies I have just described are by no means either definitive or brilliant. The development of applied procedures to improve health

must first progress through a series of pedestrian efforts. Research in this field has been so long neglected that we are faced with a task similar to that assumed by Dr. Thomas M. Rivers when he assembled a group of young scientists and persuaded them to begin the classification of the thousands of existent strains of poliomyelitis virus. A science of health services is long overdue, and meticulous scientific attention has been conspicuous by its scarcity. Yet the stakes are high, and the Health Research Council is thankfully making them higher. It is traditional for industry to spend five to ten times as much, or even more, for development as for research. The Health Research Council recognizes both categories as research and permits each project, each career investigator to compete individually without prejudice other than that his project be a worthwhile one, scientifically organized, sensitive to possibilities of serendipity and capable of answering significant questions in either research or development.

It does appear, therefore, that at subsequent meetings of this group we shall be in a position to report extensively on the actual accomplishments of these and other studies aimed at improving our status as an underdeveloped nation!